

Work Order ID 83693

April-23-12 3:59:25 PM

83693

Page 1

Item ID: D4154-041

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Wearplate Assembly

Start Date: 23/04/2012 Start Qty: 8.00

8

Cust Item ID:

Required Date: 07/05/2012 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals: Process Plan: MLJ

Date: 12/01/24 Tooling:

Date:

Run Start *NR1*

QC:

Date: SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

D4154

100

0.00

100

Large Fab

Large Fab

Memo

0.00

1- on D4155-1, fill cut outs with hardecoat welding rod as per dwg D4154

DT9756

2059 B Hardecoat Welding Rod

BATCH# M/22030 → 2059B

2-weld D4155-1 to wearplate by positioning holes together as per dwg D4154

304 S.S. Welding Rod

BATCH# M/20013

3-Transfer drill holes in bar

4- Use DT9684 to check fit after welding

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00

110

QC

Quality Control

Memo

0.00

ⓧ ml 12-07-11

12-7-12

H:\FORMS\Quality Assurance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83693

April-23-12 3:59:25 PM

83693

Page 2

Item ID: D4154-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: Wearplate Assembly

Stop *NS2*

Start Date: 23/04/2012 Start Qty: 8.00

8

Cust Item ID:

Required Date: 07/05/2012 Req'd Qty: 8.00

8

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00

120

QC

Memo

0.00

Quality Control

150

0.00

150

Small Fab

Memo

0.00

Small Fab

1- After finish, coat entire top (concave) surface as per note 11 on sheet 2 of 3
dwg D4154. B 122237

160

QC5- Inspect part completeness to step on W/O

0.00

160

QC

Memo

0.00

Quality Control

DAS
16
11/07/16

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng/ Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 83693

83693

Page 3

April-23-12 3:59:25 PM

Item ID: D4154-041 Accept *N9000040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Wearplate Assembly
 Start Date: 23/04/2012 Start Qty: 8.00 *8* Cust Item ID:
 Required Date: 07/05/2012 Req'd Qty: 8.00 *8* Customer:
 Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Identify as per dwg & Stock Location: <u>FP-1</u>	0.00							
170									
Packaging	Memo	0.00							
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.00							
Quality Control:									

X6
counted & measured

12/7/18

MF

12-07-18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

April-23-12 3:59:28 PM

Page 1

Work Order ID: 83693

83693

Parent Item: D4154-041

D4154-041

Parent Item Name: Wearplate Assembly

Start Date: 23/04/2012

Required Date: 07/05/2012

Start Qty: 8.00

Required Qty: 8.00

Comments:

IPP Rev:A 10.09.21 new issue DD verf:EC
10.11.04 added DT9684 DD verf:EC
per dwg revB DD verf:EC

IPP Rev:B
IPP Rev:C 11.04.14 as

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4154-1		Manufactured	No			100	Each	1.0000	1	8			
D4154-1													
Plate													
83217 x 4													
84746 x 2													

D4155-1		Manufactured	No			100	Each	6.0000	1	8			
D4155-1													
Bar													
83218 x 6													

Location

WA

66312

Loc Qty

1

1

Loc Code

**

(+6)

me 12-07-11

**

(+6)

me 12-07-11

Location

WA

82948

Loc Qty

6

6

Loc Code

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☐ DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

ENGINEERING CHANGE NOTICE
DART AEROSPACE LTD

Date: 12.05.03	Job No.: RD3403	ADR Yes/No: N	ADR Date: 12.05.03	ECN #: 12- 582
Product No.: D350-636		Created By: RF	Approved By: RF	
Product Name: Skidtube Installations		Checked By: RF		

Distribution	Reqd	Resp	Initial / Date
Production Manager / Coord.	Y	LE/MP	
Purchasing Coord.	Y	GL	
Production Engineering Coord.	Y	EC/DD	

Distribution	Reqd	Resp	Initial / Date
DQA / QA Coord.	N		
QC Coordinator	N		
Customer Technical Support	N		
Marketing	N		
Customer Order Processing	N		

Reason for Change: Revise D4154 per Production feedback.
Product Improvement

Documents Affected:
D4154 Rev. D

PARTS MUST COMPLY



PREVIOUS PARTS SATISFACTORY



#	Quality Assurance Actions	Reqd	Resp	Notes	Complete
1	Notify Previous Customers	N			
2	Notify Eurocopter France	N			
3					

#	Engineering Actions	Reqd	Resp	Notes	Complete
4	Required Documents/Drawings Under Review	N			
5	Update Master Document List (MDL)	N		UPDATE MDL NEXT UPDATE	
6	Update Product Compatability Matrix	N			
7	Create Eurocopter Form (FEE)	N			
8	Notify TC / FAA of Change	N			
9					

#	Document Control Actions	Reqd	Resp	Notes	Complete
10	Move Electronic Files/Design Journal	Y	KJ		12.05.09 RF
11	Update Product Specification Files	N			
12	Update Approved/Preliminary Dwg PDF Files	Y	KJ		12.05.09 RF
13	Update Document Record (DR)	N			
14	Update Product Development Summary	N			
15	Update QSI 021 and/or STC Approval List	N			
16	Update Parts / STC Database	N			
17	Update / Verify ARC Database	N			
18	Create / Update Change Record Form / Item Card Database	N			
19	Create / Update PPP's	N			
20	Red Decals required?	N			
21	Update Document Control Database / Laminated Dwgs	N	RF		
22	Update Grey Project / Electronic Binder PDF Files	M	RF		
23	Update D-Part/M-Drawing/DSI/DEO Master Binders	Y	KJ		12.05.09 RF
24					

Description / Action:

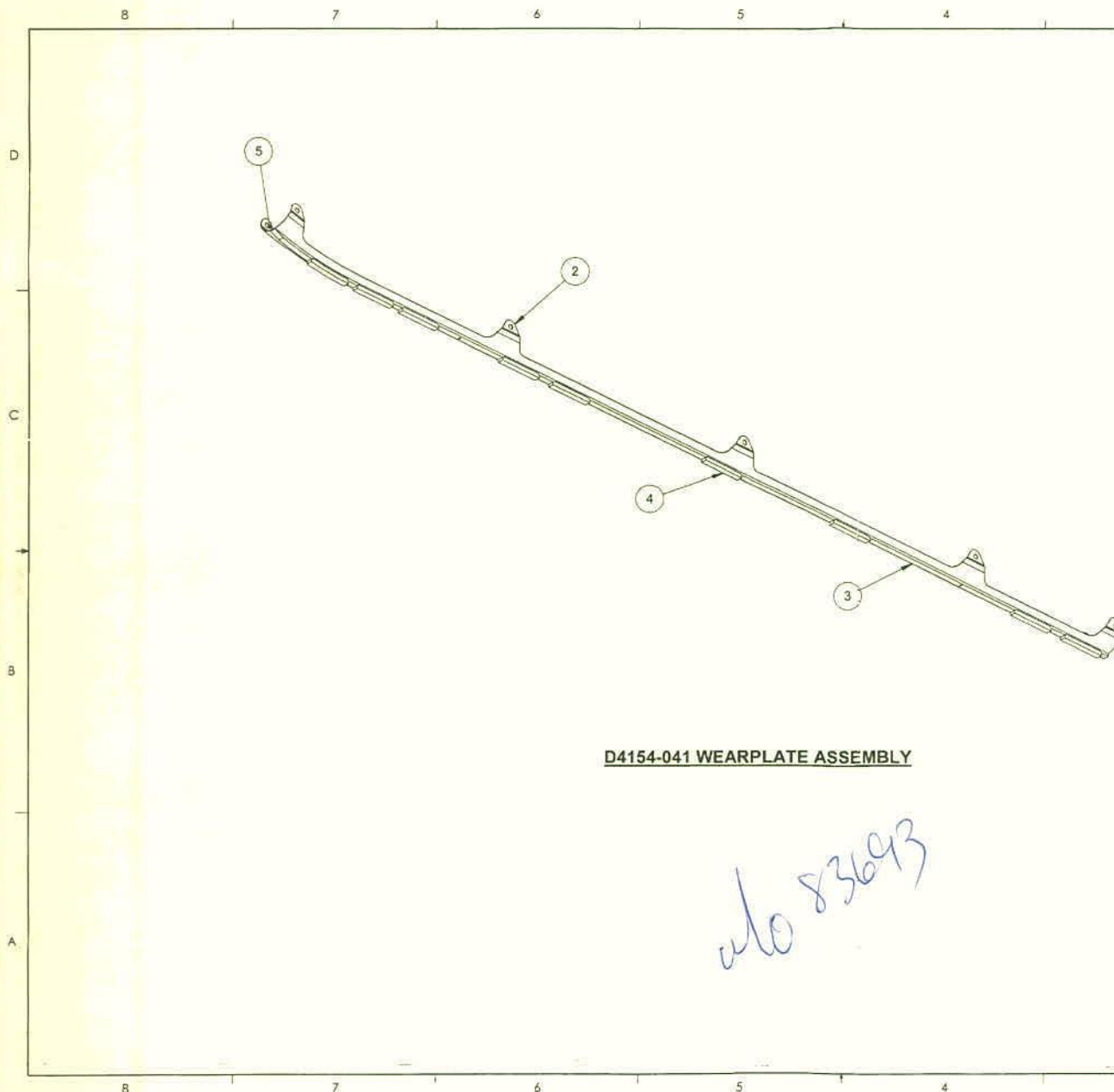
Update BOM/routing for D4154 Rev. D
D4154-1F Flat Pattern per Rev. C can be rework by plugging the holes while making D4154-041 and transfer the holes using drawing D4154 Rev. D
Update D4154 water jet program per D4154 Rev. D dxf.

stlu-13804154-1
1-66312
12-83217

5-83220
5-83219
8-83693

ECN Verified & Complete: _____

Date: _____



ITEM NO.	QTY. -041	PART NUMBER	DESCRIPTION
1	X	D4154-041	WEARPLATE ASSEMBLY
2	1	D4154-1	PLATE
3	1	D4155-1	BAR
4	A/R	2059B	HARDCOAT, (SEE NOTE 9, SHT 2)
5	A/R	4714	(SEE NOTE 11, SHT 2)

RELEASED
2012-05-09
MD

D4154-041 WEARPLATE ASSEMBLY

D	70.45 WAS 74.45 & Ø 0.188 HOLES NOW 2 PL (ZN C4-3 & C7-3)	RF	12.05.03
C	REVISE NOTE 9 (ZN A8-2); ADD HARDCOAT (ZN B7-2); ADD DETAIL A (ZN C2-2)	RF	12.02.21
B	ITEM 4 WAS PR1422 (D3-1); REMOVED FINISH TO NOTE 2 (A8-2); REMOVED SECTION A-A (NO LONGER REQUIRED); REVISED D4154-1F	MB	11.04.05
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	RF		
CHECKED	RF	DRAWING NO. D4154	REV. D SHEET 1 OF 3
MFG. APPR.	RF	TITLE WEARPLATE ASSEMBLY	SCALE NTS
APPROVED	RF	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	
DE APPR.	RF		
DATE	12.05.03		

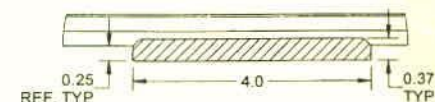
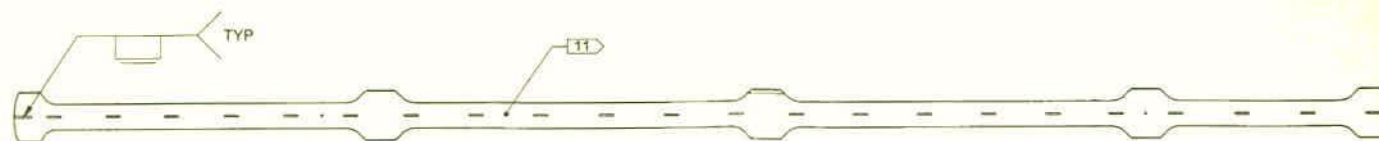
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prov: Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

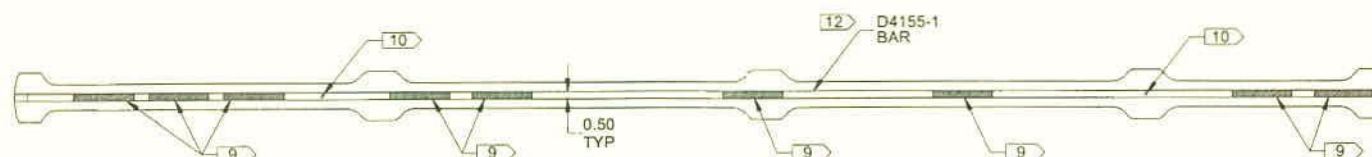
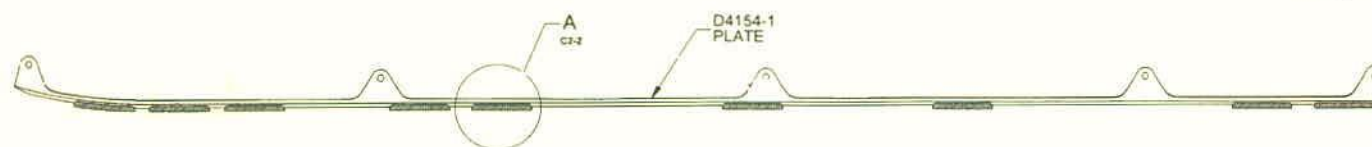
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DETAIL A CS-2
TYP



D4154-041 WEARPLATE ASSEMBLY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 6.88 lbs
- 8) WELDING: PER QSI 004
- 9) 2059B HARDCOAT WELD, 0.37 THICK x 0.50 WIDE, FLUSH WITH D4155-1 BAR ON LATERAL SURFACES, 9 PL
- 10) TRANSFER DRILL \varnothing 0.188 HOLES FROM D4154-1 PLATE TO D4155-1 BAR
- 11) COAT ENTIRE TOP (CONCAVE) SURFACE WITH A LAYER OF PLUS ONE ROCKGUARD 4714, 0.020-0.040 THICK
- 12) FORM TO MATCH PROFILE OF D4154-1 AT TIME OF WELDING

RELEASED
2012-05-09
MD

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. D
MFG. APPR.	<i>[Signature]</i>	D4154	SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	WEARPLATE ASSEMBLY	NTS
DATE	12.05.03	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS UNCLASSIFIED AND IS SUPPLIED IN THE OPEN SOURCE CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

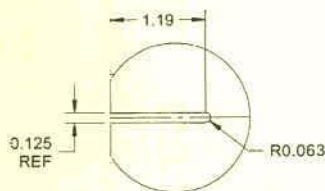
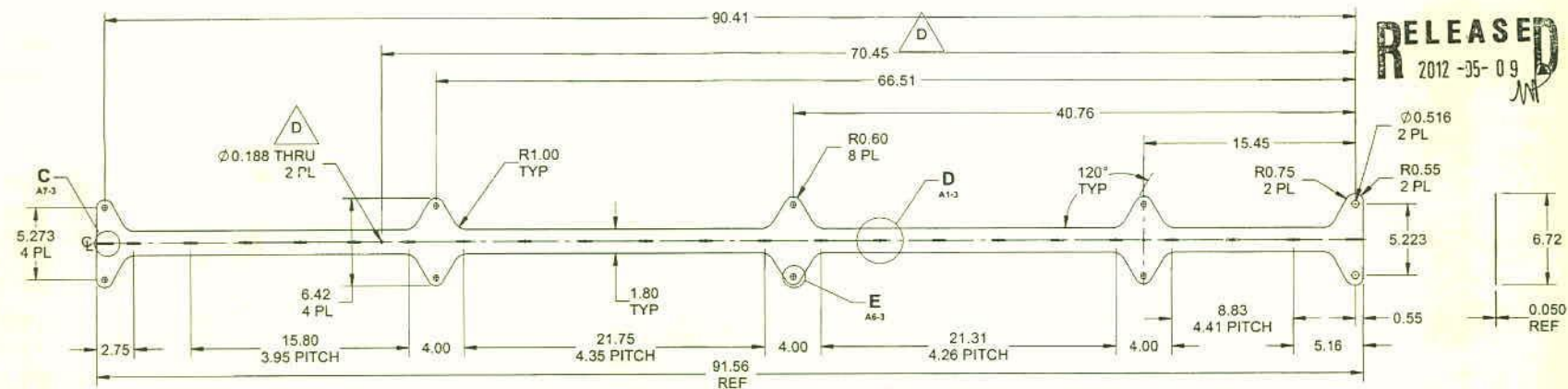
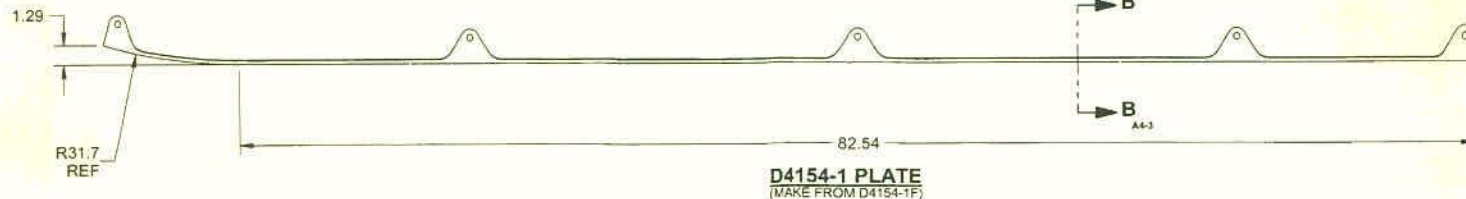
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

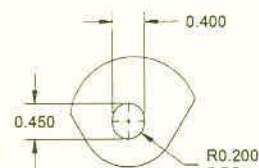
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

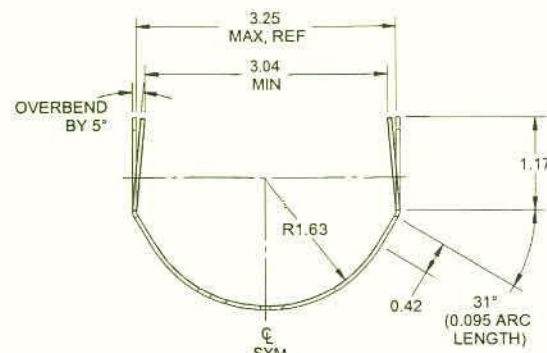
NOTE: Date & initial all entries



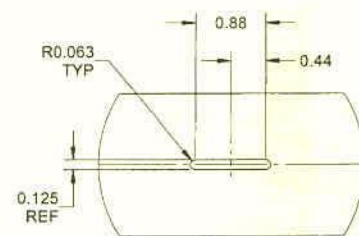
DETAIL C
END SLOT DETAIL, 2 PL C7-3



DETAIL E
SLOT DETAIL TYP C4-3



SECTION B-B D3-3



DETAIL D
SLOT DETAIL TYP C4-3

- NOTES:**
- 1) MATERIAL : AISI 304/316 STAINLESS STEEL PER AMS 5513 OR 5524 OR ASTM A240 OR ASME SA240 18 GAUGE 0.050 THICK, (REF. DART SPEC. M304S18GA)
 - 2) FINISH : NONE
 - 3) TOLERANCES : PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS : INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES : 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION : NONE
 - 7) WEIGHT : 2.95 lbs

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED		DRAWING NO.	REV. D
MFG. APPR.		D4154	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSEMBLY	NTS
DATE	12.05:03	<small>COPYRIGHT © 2010 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

RELEASED
2012-05-09

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries